

# THE **KEEPER**

**AAZK BULLETIN**



**1973**

**American Association of Zoo Keepers**



# AMERICAN ASSOCIATION OF ZOO KEEPERS

## NATIONAL HEADQUARTERS

8024 Tommy Drive  
San Diego, California 92119  
(714) 463-0738

### Board of Directors

Richard Sweeney, San Diego, Cal.  
Perry Alexander, Fresno, Cal.  
Ken Kennedy, Vancouver, Canada  
Ed Roberts, Stone Park, Mass.  
Sam LaMalfa, Milwaukee, Wis.  
Gerald Thomas, San Diego, Cal.

### Honorary Members

Dr. Jean Delacour  
Gloria Stewart  
James M. Stewart  
Ivan Sanderson  
R. Marlin Perkins  
Marvin L. Jones  
Efrem Zimbalist, Jr.  
Mrs. E. Zimbalist, Jr.

### Regional Coordinators

Rick Steenberg, St. Paul, Minn.  
Maurice Peterson, Madison, Wis.  
James Hunter, Boston, Mass.  
Mickey Barrett, San Diego, Calif.  
Greame Mackendrich, Winnipeg, Canada  
Randall Reid, Birmingham, Ala.  
Dennis Jacobs, Memphis, Tenn.  
Curt Williams, Boise, Idaho

### Award Chairman

John A. Siegel

### AAZK-AAZPA Liaison Committee

Randall Reid, Chairman

## AAZK MEMBERSHIP -- DUES INFORMATION

Affiliate (Keepers)	\$10.00 Annually
Associate	\$10.00 Annually
Foreign	\$10.00 Annually
Student	\$ 5.00 Annually
Contributing	\$25.00 Annually
Supporting Life	\$200.00

All Memberships include subscription to THE KEEPER.

AAZK Shoulder Patches are also available at \$1.00 each.

Address all AAZK Membership correspondence to AAZK Headquarters, 8024 Tommy Drive, San Diego, California 92119.

# THE KEEPER NATIONAL AAZK BULLETIN



March-April 1973

Vol. 6 Nos. 3 & 4

## TABLE OF CONTENTS

Editorial . . . . .	29
Letter from Headquarters . . . . .	30
Observations on Elephants by Ed Roberts . . . . .	31
Zoo Reviews . . . . .	34
The Water Moccasin by John D. Groves . . . . .	35
Women in Cages by Gay Kuester. . . . .	37
A New Hippo Pool by Jim Marlett . . . . .	39
Rock Hyraxes at Calgary Zoo by Toby Styles . . . . .	40
Data Pool (Edited by Pat Sammarco) . . . . .	43
Behind the Guardrail (Edited by Larry Sammarco). . . . .	44

THE KEEPER, the official national publication of the American Association of Zoo Keepers, is published six times a year.

All AAZK Memberships include a subscription to THE KEEPER. Single copies, \$1.00. Opinions expressed by authors are their own and do not necessarily reflect the policy of the American Association of Zoo Keepers.

Editorial and Advertising Offices:

THE KEEPER  
186 West Quincy  
Riverside, Illinois 60546

### Editorial Staff

Dewey Garvey, Editor  
Gay Kuester, Associate Editor  
Larry Sammarco, Associate Editor  
Pat Sammarco, Associate Editor  
Pat Sass, Associate Editor  
Pat Stout, Associate Editor

### Editorial Advisors

Phil Cihlar & Maureen McLaughlin  
Brookfield Zoo, Chicago Zoological Park





# INTERNATIONAL ANIMAL EXCHANGE, Inc.

**AMERICA'S LEADING WILDLIFE**

**Importers—Exporters**

**Mammals—Birds**

**Reptiles—Amphibians**

*Specializing in Sales Purchases and/or  
Exchange of Animals Throughout the World*

1489 East Nine Mile Road  
Ferndale, Michigan 48220  
U.S.A.

Telephone: (313) 545-2820 or 545-3348  
Cable Address: Bongo-Ferndale

Box 1046  
Mogadiscio  
Somalia  
AFRICA

*ADVANCEMENT - EDUCATION - ENJOYMENT - INVESTMENT  
-WHATEVER YOUR REASON-*

**RALPH CURTIS BOOKS**  
OFFERS THE LARGEST SELECTION OF  
ZOOLOGICAL & WILDLIFE BOOKS

Those Hard-To-Find Titles  
From Publishers Around the World.

*"We stock all the International Zoo Yearbooks  
and hundreds of books on Zoos, Animal &  
Birdkeeping, Mammals, Birds, Reptiles, Fishes,  
Conservation, and similar subjects."*

**RALPH  
CURTIS  
BOOKS**

2633 Adams Street  
Hollywood, Fla. 33020  
Tel. (305) 925-4639

ZOOLOGICAL BOOKS

Our big 27-page catalog,  
listing over 600 titles,  
FREE to AAZK Mem-  
bers and Associates.



## EDITORIAL

Thanks to all for the fine response we have received on the first issue of THE KEEPER. It feels good to have our efforts recognized. THE KEEPER is put together with the combined efforts of the Brookfield and Lincoln Park Chapters of AAZK. The labels for mailing of each issue come from the Topeka, Kansas chapter. The articles come from every member who wishes to see their observations in print. This is the combination that will keep AAZK alive and THE KEEPER in print.

In all issues of "THE KEEPER", we would like to print a picture of the author. Please send along a black & white photo with all article submissions. Deadline for articles to be printed in the May-June issue will be April 20.

Again, thank you.

Dewey Garvey  
Editor

CORRECTION! The article, "The Saiga Antelope", Vol. 5, No. 11 & 12, was authored by Greame Mac Kendrick, Assiniboine Park Zoo, Winnipeg, Canada, Not, as credited, by Ken Kennedy.

---

### NOTICE AAZK HEADQUARTERS

If enough interest is shown, a membership certificate, suitable for framing will be made available at a cost of \$2.00 each . . . If you would like to order one, please advise by letter. Do not send money now. This notice is only to determine the degree of interest.

---

How often do you hear the familiar, "What's in it for me"? Well, I hear it often, almost everytime I ask a keeper to join AAZK. They all seem to forget that you have to put something into AAZK before you can get something out of it. You can get tired of listening to everyone complain that AAZK is nothing but a social club. Not what we had been promised: to upgrade the animal keeper by recognition and education. Helping out with problems that occur from one zoo to another. Well, how can we upgrade and educate when the keeper won't even help? You can't sit back and expect things to happen by themselves. The keepers have to support AAZK by attending local meetings and contributing to the bulletin. If someone needs help, OFFER IT, don't sit back and wait for someone else to do it. Remember, "I must do something" solves far more problems than "something must be done"

Pat Sass  
President  
Lincoln Park Chapter AAZK

Dear AAZK Members:

Nineteen seventy-two was a very intriguing year for AAZK. The tides of organization criticism, like the waters of the Atlantic and Pacific, rose and fell regularly. This unavoidable phenomenon had its effects on our progress. At times, our shores of direction were cluttered by the debris of misunderstanding and the driftwood of petty bickering, and the results are reflected in our membership renewals. The excuse of dirty beaches took its toll. We lost many people because of impatience and an unwillingness to improve our plight.

Many of you chose to ride out the storm we encountered, and I write this letter to you.

In spite of inter-organizational strifes, and our difficulty in paying our debts, you waited for the next breakers in hopes of finding a beach of clear sand for AAZK. There is such a beach, and it has been washed clean by the waves of perseverance and true professional concern, and it belongs to each of us who realize the real value of this organization.

Nothing in this world, worth having, comes easy or cheap. Nor does anything we have, last, without continued care. AAZK is no exception. Your continued support attests to your belief in this philosophy, and your membership is respected. You are the people to be thanked, and we do so.

Those of us who have been charged with leading AAZK have enjoyed no picnic for our efforts, but neither have we been unrewarded. We view AAZK as the vehicle to a better future for our animals, and for the professional zoo and aquarium keeper. We pledge our efforts to retain your friendship and support.

Thank you for sticking with the best organization in the United States.

Sincerely,

Dick Sweeney  
Executive Secretary,  
AAZK Headquarters





## Observations on Elephants

By Ed Roberts, Walter D. Stone Zoo, Stoneham, Mass.

As you may all know, elephants have been, shall we say, domesticated for at least 2,000 years and at different zoos, they have been and still are one of their prime attractions. Still, few people realize that they are still wild animals. This is because very few people have any knowledge of elephant psychology. We enjoy watching the lion and tiger acts and we know there is danger for the trainer every moment he is in the cage with them, but—very few people realize that more handlers are injured or killed by elephants and the ratio is about 6 to 1. The main thing to remember is that the only way to control an elephant is for the elephant to have complete respect for its handler and the way for the handler to gain this respect is for the elephant to fear him.

If a handler fails to teach his elephant fear, then he had better keep away from it. If an elephant does not fear you, she will not respect you and therefore, will take advantage of you and cause all sorts of hardship for you. We all realize that the elephant knows its own strength, but has no desire to use it on anyone she loves. It is also smart enough to realize that man can take its life if the need arises. You teach an elephant fear through punishment and discomfort, but only do you do this when the elephant has done something she shouldn't have.

An elephant can develop love for her handler provided he is judicious in his care for her. She will understand very quickly that she will only be punished when she has done something wrong, and elephants KNOW when they do something wrong and don't let anyone tell you anything to the contrary.

Elephants manifest their love for their handlers in different ways. Some roar a greeting the first thing in the morning; some flap their ears very rapidly like a dog wagging his tail; some get so excited they wet themselves; some when they are loose keep turning in circles till they are spoken to; some will sniff you with their trunks and when they finally recognize by smell, they will rumble deep in their throats very much like the purr of a cat, but magnified a thousand times.

If an elephant reaches out her trunk and smells you, it is a gesture of friendliness and to push aside the trunk is like ignoring a hand that is offered you in a handshake.

Elephant handlers I've come across, carry on conversations with their elephants, some spoken, some cursing, some growling and even some by telepathy. Your tone of voice is what the elephant recognizes. One of the most common uses of a word we use is 'STEADY'. The elephant knows this is the command to stand still and she will when properly trained, accept this word and will adhere to it!



The elephant's trunk has over 12,000 muscles of remarkable coordination and yet you see many people in zoos thump the poor elephant's trunks, never realizing that if the trunk ever got injured, the elephant would starve to death.

An elephant on its feet is as fast as a cat and that is one of the reasons why elephants should be chained at night. Elephants are notoriously curious and if not chained at night can get themselves into more mischief than you can imagine.

If a man wishes to become an elephant handler, he must go through a training period for at least 60 days with a qualified handler. If the handler feels or notices that the trainee shows the slightest fear of working around the elephant, he must reject him. The elephant is able, very much like a dog, to sense fear in man, and will take advantage of it when time permits. The characteristics of love, hate and exceptionally high intelligence make these animals efficient killers. Many dangerous elephants will strike first with their trunk knocking the person down, and when they really mean business, they will either step on the person or sit on him and even some elephants have been known to do head stands on their victims. If they have no intention of killing, they will just toss the person aside and they will not attempt to further harm him.

Although most people think that the chimp family comes closest to us in intelligence and emotions, it is only because none of them have ever had the chance to study elephant behaviour. Elephants have the ability to think and to reason. Don't forget, the elephant reaches maturity at the same time a human does; it reaches old age the same time a human does; it knows how to hate, love, fear and friendship. And elephants group together for much the same reason people do—companionship, as they fear no one but—man.

Sometimes we hear the phrase, an elephant has gone bad. This does not usually happen in female elephants, but when one does, she is worse than a 'Bull'. This could happen when the elephant has been mistreated or spoiled during her pre-teen or teen years, and you can bet your life that you can spoil an elephant just as you can spoil a child.

The 'Bull' elephant does most of his killing during the 'Musth' season. Many people and even some experts seem to think this has something to do with the elephants' sex life, but as far as I can determine, no proof has ever been established. About once a year a male elephant is in Musth and every elephant man who works with these males can immediately tell when it is about to happen. The vent holes on each side of the elephant's temple starts to excrete an obnoxious smelling fluid. This is the time you stay away from the brute, because when it happens, for some unknown reason, the elephant is absolutely insane, and it makes no difference how palsy-walsy you are with him, he'll kill you if he can get ahold of you. At this time, the Bull is extremely dangerous and food must be thrown to him so he won't starve and this lasts from four to six weeks. The female elephant does not have this problem even though she too has the vents on her temples. So, and significantly, of all the elephants in this country, 90% of them are females. Besides, elephants do not breed



well in captivity.

In the wild, the elephant's sex life is carried on in privacy, with a courtship and honeymoon. Both males and females reach maturity between 15 and 20 years of age and their best productive years are between 20 and 35. Elephants nurse their calf for about two years in the wild and the little one is under foot requiring all sorts of care for about 5 years. The elephants gestation period runs about 22 months and at birth, the little one weighs about 150 to 300 pounds.

As far as old age is concerned, some do reach the age of 70. Working elephants usually go to about 55 according to records kept by the Bombay Burma Trading Corp., and a zoo-kept elephant, under optimum conditions, should make 70.

Both sexes grow tusks, and course you know that tusks have been a great source of ivory for hundreds of years. The average tusk of an elephant could weigh over 150 pounds. The elephant has no sharp teeth, all of them are used for grinding. They have no teeth or rather there are no teeth in the front of the lower jaw and only the tusk in the front of the uppers. During the elephant's lifetime, she has six successive sets of molars. One single molar is about 8 inches long and 3 inches wide and set full of ridges for grinding.

As far as feeding is concerned, the elephant should be fed grain, fruits and vegetables and a good grade of timothy hay. Care should be taken to keep an eye on what the elephant consumes. The man in charge of the elephant should know her dietary problems and he should also be the one to recommend any vitamin additives. Elephants feed themselves with their trunks and they can become so adept with that little knob on the end of their trunks, they can pick your pocket without you knowing about it. They can also regurgitate water by stomach muscle contraction. Elephants love water for bathing and many times you will see an elephant frolicking in her pool with just her trunk out of the water breathing like it was a snorkel. Asiatic elephants are shade seekers while their cousins from Africa will graze in the sun.

All elephants are bristly and not being too well insulated, require heated quarters in the winter. Some elephants enjoy cigarettes, cigars, popcorn, candy, ice cream, fish and almost all of them like soft drinks like coca-cola, ginger-ale and the like. Quite a few like hard drinks too, like wine, beer and booze. Often times you will see an elephant roll up a ball of dirt with her trunk and eat it. Apparently it has something to do with the elephant's needs for her digestive system.

As far as memory goes, the elephant's is about the same as a human's. They can be trained to do a number of tricks and they seem to retain their knowledge of them.

As far as displaying elephants goes, a lot will have to do with the climatic conditions. In the northern climates, the elephant has to have heated quarters in the winter time, and the temperature inside of the building should not go below 65 degrees. Elephants should be separated from the public by a moat, preferably a dry one. The edge of the elephant's moat should have blunt steel points set in the concrete so as to discourage her from walking on it. If she has to be kept in during the winter, her exercise period should be limited to four hours, otherwise you are going



to have trouble getting her used to going back to her chains. Each elephant stall should have two bull rings cemented into the floor and there should be at least 20 feet between elephants for ease in moving around them for you never know when two of them might decide to make a sandwich with you in the middle. Outside display of elephants in yards can be had if there is available room and if at all possible, the yard should contain a pool for the elephant to play in. The outside perimeter must have heavy steel bars around it and the public should be far enough away so that the elephant has no chance of grabbing anyone. Care should be taken to keep the elephant area free of debris at all times. I've seen bottles, popcorn boxes, plastic baby bottles, balls, fireworks and any number of things thrown into the elephant's yard by the stupid public, so you've got to be on the alert at all times. Care should also be taken not to have the elephant stand in a chill wind. If your elephant should take sick, all possible efforts should be made to keep it on its feet, for it is said that once an elephant goes down, it will never get up again.

If two elephants are in a building together, one will sleep while the other stands 'guard'. The following night the procedure is reversed.

One final thing: I firmly believe that the elephant is the closest to the human race of all animals because of its emotions, its human characteristics, its behaviour and its inherent love for this human race that has made it its captive.

*Note: The writer wishes to acknowledge the help of Mr. T. Veasey, former Ringling Bros. elephant trainer, and if it were not with this man's help, this paper would never have been written.*

<b>ZOO REVIEW</b> By Pat Stout, Associate Editor	Get the bear facts! These two excellent publications are well worth adding to your library.
---	---

Denning Habits of the Polar Bear (*Ursus maritimus Phipps*) by C. Richard Harrington, Canadian Wildlife Service Report Series—Number 5, Ottawa, 1968 paperback, 30 pages, \$ .50.

Presents data on denning habits of polar bears in the Canadian Arctic, gathered between 1961 and 1964, and relates them to the findings of other observers. The insights gained from this publication can be useful in the management and breeding of polar bears in captivity.

Bears—Their Biology and Management, edited by Stephen Herrero, IUCN Publications new series No. 23, Morges, Switzerland, 1972 paperback, 371 pages, \$7.50.

This publication is a selection of papers presented at the Second International Conference on Bear Research and Management held at the University of Calgary, Alberta, Canada, November 6-9, 1970. The papers cover a wide range of topics including Ecology, Population Characteristics, Movements, Denning, Natural History, Bear Behavior and Bear Relationships with Human Beings. The wealth of information contained in this book serves as a comprehensive reference on the Biology and Management of bears.





## The Water Moccasin

By John D. Groves, Stanley Park Zoo, Vancouver

The water moccasin has been well-known to science for nearly 200 years. It was first described by Lacepede in 1789, under the name *Crotalus piscivorus*. Since its original description in Lacepede's *Natural History of Serpentes*, numerous other names were applied to this snake. It was not until Cope (1859), that the water moccasin was placed into the genus *Agkistrodon*. Other names since Cope, have been applied to the water moccasin but it is more closely relative to other snakes in the genus *Agkistrodon*.

The water moccasin is closely relative to the copperhead, *Agkistrodon contortrix* and the Mexican Cantil, *Agkistrodon bilineatus*. Snakes of the genus *Agkistrodon* are relatively primitive members of the *Crotalidae*, which is one of the most specialized families of snakes. The members of the genus are not restricted to the New World, other members are found from extreme southeastern Europe through temperate Asia to Japan and southeastern Asia including Indonesia.

The water moccasin is predominantly brown, ranging from reddish and greenish brown to almost black. It has 10 to 17 irregular dark brown bands on a paler ground color. The young are lighter than the adults, some being nearly salmon pink. The juvenile coloration is retained until about the third year. Tip of the juvenile tail is sulphur yellow. The ventral surface is white to yellowish-white with brownish moltings. The head is dark brown with light stripes above and below the eyes meeting on the neck. The throat is yellowish-white.

Although the water moccasin is usually associated with swamps and lowlands along river bottoms, it lives in a variety of habitats ranging from salt marshes to cool clear streams and from sea level to an altitude of 2,300 feet. It can be found in almost any habitatual niche from southern Virginia to Florida including the Keys and nearby islands. In the West, it reaches Texas in the South and Kansas to the North.

This snake has a diet as variable as its habitat. It has been known to eat fish, amphibians, reptiles, birds, mammals and insects. Fish and amphibians seem to consist the main items in the water moccasins' diet.

In the Spring, the water moccasin emerges from hibernation during uncomfortable and dangerous temperatures in order to obtain food and mates. At this time of the year, the water moccasin is very sluggish and more vulnerable to predation. As the temperatures raise, they become more active and aggressive. When cornered at this time, the water moccasin will stand its ground and strike at any intruder. Mating occurs early in the Spring (March to April), but may extend into the Summer in the northern parts of its range. In cool areas, breeding may take place more than once



in a season. During summer and early fall, the water moccasin stores fat in the lobes of the abdomen in preparation for the period of winter hibernation. Gravid females generally do not feed as frequently as other snakes, because they tend to become inactive as the ova develop. Whether or not the females feed heavily after giving birth is not known. Birth occurs during August and September. The number of young at birth may range from one to sixteen, but usually average between six and seven. During the day, when the temperatures reach 80 degrees or more, the water moccasin restricts its activity to sunning itself along some water body or trail in the forest. During these times, the water moccasin is most active in the early morning or evening.

In preparation for the winter months, the water moccasins migrate inland usually to dry forested hillsides where they den. They commonly den among rocks along with several other species of snakes. During denning, there is no hostility and each individual may derive benefit from contact with others by which favorable conditions of temperature and humidity are maintained. Water moccasins have been found in the winter during warm spells away from the dens in southern states. Here they may be found under logs, rocks, tin and other such favorable hiding places. During these trips away from the den, it is not known whether or not the snakes feed.

The venom and poison apparatus have been developed primarily as a means of causing rapid death to small animals that are usual prey. As a protective device against larger animals, including man, the venom may have some value, but this was a secondary function in the evolution of the poison mechanism. The venom contains haemotoxic and neurotoxic elements, along with some non-toxic substances, thus enabling efficient and rapid spreading of the venom through the body of the victim. Some authorities consider the water moccasin as the third most toxic snake in North America, with the first, the coral snake (*Micrurus fulvius*) and the Eastern Diamond-back Rattlesnake (*Crotalus adamanteus*) as the second most toxic. This estimation is taken from studies of drop for drop, not quantity of venom. The water moccasin has been known to cause death to large mammals, including man. The record amount of venom taken from a water moccasin was 1.094 grams (dried venom), this was taken from a five-foot male that had been in captivity for 11 weeks and milked five weeks earlier.

#### SAN DIEGO CHAPTER MEMBERS ERECT EDUCATIONAL EXHIBIT AT ZOO

A new AAZK educational exhibit has been installed in Cay Canyon, next to the lion enclosure. It is a large bulletin board and carries a text and photos of a specific species each month. The text, written by a keeper, points out information of interest pertinent to that particular animal. A different animal or bird will be featured each month. At the present time, a survey is being made of zoo visitors to determine the value of the exhibit. It activates an interest in keepers to write about the animals they tend.





## Women in Cages

By Gay Kuester, Brookfield Zoo

Brookfield Zoo has continued its tradition of innovation by being one of the first zoos to hire women keepers in numbers. However, women have long been associated with management of the animal collection at Brookfield. Grace Olive Wiley was our first Curator of Reptiles in 1934. Since 1954, the Children's Zoo has been under the jurisdiction of capable women. The women keepers at Brookfield are certainly liberated in the sense that they have no job restrictions. They get the same pay, wear the same uniforms, work the same hours, have the same coffee breaks, manage the same wheelbarrows full of manure and struggle with the same rusty doors. They also tend to disprove the old misconception that they are squeamish. In addition to the regular work load, our women also tend colonies of rats and chickens which are fed to our birds of prey and reptiles. One of our senior staff who refuses to be quoted says that women do a more thorough job of cleaning too; they not only do the centers of the floors but the corners as well. Through it all, they manage to look quite feminine. Our female keepers add a personal touch to the feeding and cleaning chores of the keeping profession.

Terry Blueman started in the Children's Zoo part-time in 1965. She became the main zoo's first full-time female keeper in 1967. She has worked the Aquatic Bird House, Special Exhibits Building, and is currently working in the Reptile House. After one week in the building, she was working "hot" snakes. The curator honestly says "we couldn't function without her". She met her husband (also a keeper) here in the zoo, and at home they have their own menagerie which includes two dogs, a cat, a skunk, assorted snakes, lizards and tortoises, a tank full of fish and a small eel.

Rose Bures started part-time in the Children's Zoo in 1954. The work turned into a full-time job upon the death of her husband. She has one son, 32, who is a professor of Russian in Alaska. Rose will retire as a full-time keeper on April 1, 1973 but we will still see her smiling face and enthusiastic personality around here on a part-time basis.

Mary Jo Fleming is married, started working here in 1971 and has her B.S. in biology from Northern Illinois University. She has done a great deal of lab and animal care work, but has found jobs scarce in this field. Interested in behavior, she hopes to get her Masters. Working our Small Mammal House gives her an excellent opportunity to study our Meerkat babies and to do research on our Demidoff Galagos.

Jean Moffitt worked for Hertz Rent-A-Car before coming to the zoo. An avid horsewoman, she has always had an interest in animals and waited two years to get her job here in 1970. The zoo recently obtained a Kiwi and this animal as well as all



the others in the Aquatic Bird House are under Jean's care. She enjoys pack trips and mountain camping, has an Ornate Lori and two cats at home, and raised a baby ostrich last year.

Ann Owens has worked here since 1969 after receiving her B.S. in Zoology from Eastern Illinois University. She had originally wanted to become a vet, but enjoys the zoo and will probably make it her career. She used to break horses and owns her own quarter horse. She backpacks into wilderness areas whenever time warrants. Her run includes the Small Antelope House, Ibex Island and the Wolf Woods.

Ann Petric has worked in the zoo since 1972. She started in the Reptile House but showed a positive reaction to the horse serum test and had to be transferred. She is currently working the big cats in our Lion House. Ann has a B.S. in Wildlife Biology from Purdue University. She is interested in animal behavior and is, at present, studying our lion cubs.

Gerry Radaszewski of our Reptile House has a B.S. in Zoology, specializing in Wildlife Management. Her original intent was to be a vet but she was constantly discouraged in college because that field "was not open to women". At school, she saw a notice on a placement board reading "Feed The Animals", Commissary Manager, Brookfield Zoo. She didn't get that job but her resume was kept on file and she was called for the job in the Reptile House and started in July of 1972. She has a bull frog named Jeremiah at home and feels that she would like to give veterinary medicine one more fling.

Gail Schneider started working in the Children's Zoo as a summer keeper. Through a series of circumstances this temporary job became very permanent. She became a full-time keeper, did a stint in the Special Exhibits Building and was then promoted to Superintendent of Children's Zoo in 1970 after the former Superintendent, Virginia Havemeyer, retired. Gail has three years of college and is author of a booklet titled Children's Zoos; organization and operation, which is published by the N.R.P.A. She is married to another keeper, Ed, and they have two lovely zoo-oriented children.

Kathy Silhan graduated with a B.A. (with honors) in Anthropology from the University of Illinois, Chicago Circle. She volunteered at Lincoln Park for two years, but as they were not hiring women as keepers at that time, she fortunately came to us in April of 1972. She works the Small Mammal House and is doing research on the Fennec Foxes and the Meerkats. Her goal is to study primates in the wild. She is Secretary of our A.A.Z.K. chapter and is quite active in zoo functions. At home, she has a parrot and a cat.

Generally speaking, the women are pretty well received. One of our keepers says he believes that there is a place in the zoo for women. The smaller houses such as Small Mammal or Reptile where most things are on a more diminutive scale are ideal. He says that the work in Pachyderm or Primate House is too hard and heavy. "Any woman who could do it would have to be very husky, and if she is that big, she belongs on a wrestling team, not in a zoo". He also believes women belong in the



home.

Another keeper says that he has no particular feelings about whether a keeper is a male or female. He rather enjoys the feminine companionship as a break in routine and feels that each person has to be judged as an individual. He says some of the women he has worked with have been much better workers than some of the men, and this has been in the houses where the work is considered "heavy".

We feel quite fortunate that the caliber of our women is so high. This is evidenced by the educational levels they have reached. They are all doing a great job in upgrading the keeping profession. Next time you are at Brookfield Zoo, stop by and say Hi—to one or all of them.

### AAZK NATIONAL NOTES

ALL MEMBERS If you have someone in mind for a gift, why not give them a gift membership in AAZK. Support AAZK by encouraging a friend to join as an Associate.

Word has been received at National Headquarters that the cost of International Zoo-News subscriptions has been increased to \$8.75 (to AAZK members only). Therefore, if any member wishes to receive this publication at AAZK's 50% discount, the new cost will be \$9.00. \$ .25 is for handling at National Headquarters. Remember! To receive this discount, all orders must go through AAZK National Headquarters, 8024 Tommy Drive, San Diego, California 92119.

Gestation booklets can be purchased through AAZK Hq. at \$1.50 each.

CONSULTATION COMMITTEE As reported in the last communique a special committee has been established to afford zoos and aquariums the opportunity to submit exhibit plans to AAZK for our consulting committee to examine and recommend ideas based on the practicality of its design.

Members of the special committee are as follows: Ken Kennedy, Ken Willingham, Sam J. LaMalfa, Mickey Barrett and John A. Siegel.

Further information about this committee can be obtained by writing to Ken Kennedy, 5561 Hardwick Street, Burnaby 2, B.C., Canada.

### A NEW HIPPO POOL by Jim Marlett, Sedgwick County Zoo, Wichita, Kansas

Using the principle of the toilet, Sedgwick County Zoo's 15,000-gallon indoor hippopotamus pool can be drained, rinsed and refilled in fifteen minutes. Water is exhausted through a 10-inch pipe to an oxidation lagoon at the extreme south end of the zoo property. The pool is refilled in less than five minutes through a 10-inch pipe using water stored in a holding tank. About one-half hour is required for the zoo's normal water supply to replenish the holding tank for the next flush.

A larger outdoor pool featuring underwater viewing is under construction. It will utilize the same toilet principle of cleaning.





## Rock Hyraxes at Calgary Zoo

By Toby Styles, Calgary Zoo

On June 4, 1970, we received two female Rock Hyraxes (*Procavia capensis*) from International Animal Exchange, Ferndale, Michigan. Due to unforeseen delays, their permanent exhibit in the Elephant House was not ready, so they were placed in a large cage in our Small Mammal House. On June 4th, we received a male from the same source. The animals had settled down well and were doing very well, when on the morning of August 24th, three babies, all female, were found dead in the cage. Each adult had one in its burrow and some of the young had been partially eaten.

On November 19th, the male and the youngest female were transferred to their new home in the Elephant House. The display measures approximately 5' wide by 5' deep by 6' high. The background and floor were finished with sculptured cement over metal lathing, coloured a reddish colour to resemble their natural habitat. Also, it includes a shallow pool with a small waterfall.

At the back of the exhibit are two nesting boxes measuring 1' x 1' x 2' 6". These boxes are removable and have a wire bottom to facilitate cleaning. They have a sliding door to separate them from the exhibit and a top door for cleaning, (see drawing).

Before moving the animals, we took one box and placed it in their old cage to get them used to it and in a few days time, we moved them, box and all, to their new home. This worked very well, as, although they were in a strange cage, they did have a familiar sleeping place.

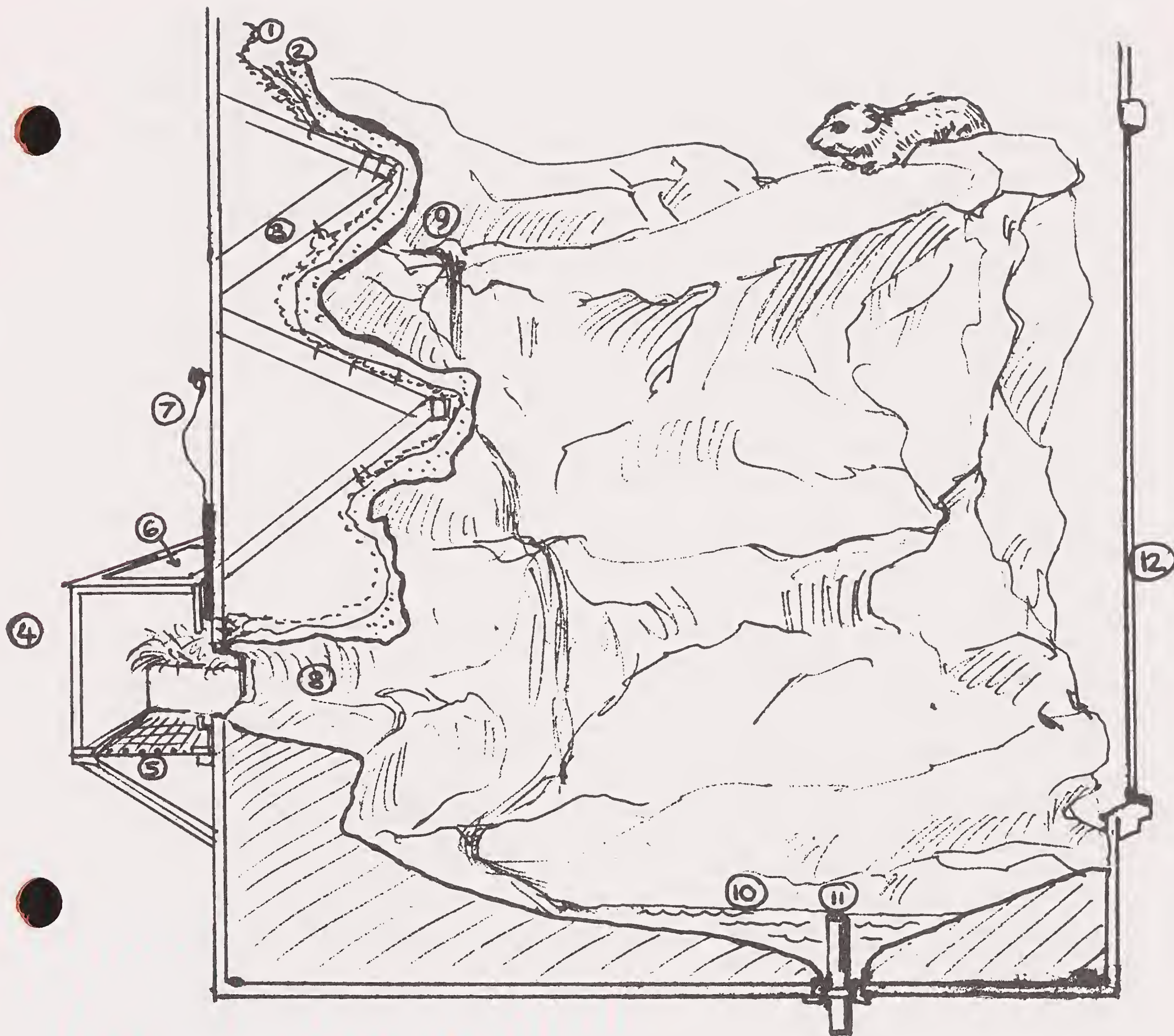
On December 19th, we moved the old female in the same manner to the new exhibit.

The animals settled down very well and on January 23rd, 24th, the young female was observed being bred.

The old female was never observed breeding, but in July, she became noticeably heavier and the babies could be seen moving. Her appetite showed a marked increase and she did not climb as much as before.

On August 11th, at 8 p.m., the night watchman watched her give birth to one baby on the floor of the cage. The baby was up and around almost instantly. The next afternoon, I was summoned by a visitor and found the old female running around with a breech birth baby hanging by its head from her vagina—she was screaming loudly and was very agitated. The others were also very agitated and the male was biting at the first baby. I called Dr. Hopf, our Vet, and we caught the female. The baby was delivered—a female weighing 6 oz., but she was dead. Upon examining the mother, we found she had one more baby to come. She was returned to the exhibit





- |  |   |
|--|---|
| 1. Metal lath                                      | 7. Entrance slide door                      |
| 2. Concrete coating sculptured into rock formation | 8. Entrance tunnel                          |
| 3. 2" x 2" wooden supports (2" x 4")               | 9. Waterfall                                |
| 4. Sleeping box                                    | 10. Pool                                    |
| 5. Screen floor                                    | 11. Water level regulating pipe (over flow) |
| 6. Hinged roof door                                | 12. Viewing window                          |



and the first baby was removed to be hand-raised. At 8:30 p.m., a third baby was born and was perfectly normal. I took the first baby home to be hand-raised and put it on a diet of Esbilac. It did not take to the diet too readily but did accept a little bit. The young are so fully-developed, that it was quite a handful to try and feed. On August 14th, we decided to try and reintroduce the baby to its mother the baby was put in and was observed nursing within 10 minutes.

On August 21st, both babies were observed nibbling on lettuce. The babies were very active, exploring all parts of the exhibit.

On the night of September 5th, six babies were born to the young female. On September 10th, two of these babies looked weak. The next day, one female was found dead in the pool. It weighed 5 oz. and had died of starvation. The second weak baby was taken away to be hand-raised. This baby, also a female, did well, but died of enteritis on September 14th. It weighed 4½ oz. All remaining babies continued to do well.

On September 26th, the old female was observed to have a vaginal discharge and was taken to the Zoo hospital for treatment. On October 14th, she was returned to the exhibit and her two babies, who had apparently gotten along without her, were immediately back nursing after a separation of 20 days.

On November 7, 1/2 were shipped to Atlanta, Georgia and 3/0 were shipped to Tampa, Florida.

On November 27th, breeding was again observed, so we can hope for more additions this coming Summer.

We have found that they would eat practically any vegetable matter and their diet consists of apples, bananas, lettuce, carrots, potatoes, etc. As it is available, we also keep a dish of Rhino pellets and Monkey Chow available at all times. They seem to particularly enjoy the chow. I have never observed them drink water.

We no longer fill the pool with water, but instead have it filled with sand in which they roll and have dust baths. Water is provided in a dish. We also have provided them with a heat lamp under which usually one can be found.

They have proved to be a most entertaining and popular display being active throughout the day, especially with all six babies playing and scampering about.

The young females' litter of six, is the largest litter we have been able to find a record of—the usual number being two to three. I think this was probably the reason for losing the two babies. They just couldn't get to a nipple at feeding time. If we ever had another litter of this size, I think we would take two away to be hand-raised.

I was unable to get a gestation period on the old female, but the young female was exactly 225 days. This is the figure most often quoted.

An interesting thing about the young female is that she has a tag in her left ear with the number 025. This makes us believe that she did come from another Zoo. If anyone knows anything about her, I would appreciate hearing from them.





# DATA POOL

Edited by  
Pat Sammarco, Lincoln Park Zoo

The feedback to the first data column was rather disappointing, due greatly, I am sure, to the time limit for reply. For this reason, we are delaying publication of the polar bear Data Pool column until the next issue. Data to be published in a future issue will concern cheetah maintenance and births. Please send details concerning your animals as soon as possible.

Please indicate the dates of Cheetah residence in your Zoo.

Date received \_\_\_\_\_ From (wild or zoo) \_\_\_\_\_

Age \_\_\_\_\_ sex \_\_\_\_\_ condition \_\_\_\_\_ quarantine details \_\_\_\_\_

Describe housing: \_\_\_\_\_

Size of cage (indoors) \_\_x\_\_x\_\_ (outdoors) \_\_x\_\_x\_\_ animals/area \_\_\_\_\_

Describe special details, i.e. shelves, caves, hills, secluded areas.

Describe feeding: \_\_\_\_\_

Frequency fed \_\_\_\_\_ amount/feeding \_\_\_\_\_ diet (including supplements) \_\_\_\_\_

Medical problems and treatments if any: \_\_\_\_\_

Present status of animals: \_\_\_\_\_

Date of death \_\_\_\_\_ Date of departure \_\_\_\_\_ Present condition \_\_\_\_\_

Breeding: \_\_\_\_\_

Were regular heats observed? \_\_\_\_\_

Frequency and length of cycle \_\_\_\_\_

Was breeding observed? \_\_\_\_\_ results \_\_\_\_\_ Gestation \_\_\_\_\_

Births: \_\_\_\_\_

Were any special pre-partum arrangements made i.e. special diet, separation of female, nest box supplied, etc.? \_\_\_\_\_

Indications of pregnancy \_\_\_\_\_

Indications of labor \_\_\_\_\_ Length of labor \_\_\_\_\_ Number of young \_\_\_\_\_

Dates of birth \_\_\_\_\_ Time spacing between cubs in one litter \_\_\_\_\_

Status of cubs at birth (live born/still born) \_\_\_\_\_

History of cubs: \_\_\_\_\_

Describe maternal rearing \_\_\_\_\_ time of first feeding \_\_\_\_\_ frequency of feeding \_\_\_\_\_

Rate of growth \_\_\_\_\_ date of death/departure \_\_\_\_\_ present status \_\_\_\_\_

Describe hand-rearing: \_\_\_\_\_

Reason for taking \_\_\_\_\_ age taken \_\_\_\_\_ procedure used to remove cubs \_\_\_\_\_

Describe incubator/cage \_\_\_\_\_ Size \_\_x\_\_x\_\_ Temperature \_\_\_\_\_ Humidity \_\_\_\_\_



Diet\_\_\_\_\_Frequency and amount fed\_\_\_\_\_Piddled?\_\_\_\_\_Weight gain \_\_\_\_\_  
Describe diet adjustments \_\_\_\_\_Medical problems/treatment \_\_\_\_\_  
Present status of animals \_\_\_\_\_date of death/departure \_\_\_\_\_  
Other notes: \_\_\_\_\_

As a long term project, I would like to accumulate data on body temperatures of as many animals as possible. Please note rectal or external temperatures, and condition of animal i.e. sick, relaxed, stressed, etc. Data for this as others always welcome. Please send data and requests for data to Pat Sammarco, 5206 N. Ludlam, Chicago, Illinois 60630. Data to be printed in the next issue of THE KEEPER must reach me by April 20. All data will be accepted and collated as a reference source and possible future printing.



## BEHIND THE GUARDRAIL

Edited by  
Larry Sammarco, Lincoln Park Zoo

Well, here we go again for another issue of THE KEEPER. I'm sorry to have to report that response was rather small, but I am confident that this situation will be remedied in the future issues.

Mr. G. William Whitehurst, who represents the 2nd Congressional District of Virginia, introduced a bill in Congress (HR 6803), which would have provided funds for Zoo improvement and would have outlined standards for Zoo accreditation. It did not pass in the 92nd Congress. Mr. Whitehurst has re-introduced this measure (now HR 1266) and hopes for more progress in the 93rd Congress. All members of AAZK are urged to send a letter to Mr. Whitehurst, voicing support of this fine measure. Our zoos need this backing from the U.S. Government, and we as Zoo Keepers will benefit from its passing. Write to:

G. William Whitehurst  
Congress of the United States  
House of Representatives  
Washington, D.C. 20515

Don't forget to mention your affiliation with AAZK. Mr. Whitehurst will provide you with a copy of the proposal upon request. (Thanks to Dick Sweeney)

### News from Philadelphia

Congratulations to another mated pair. Penrose Lab Animal Technician Susan Witzell and former Children's Zoo employee Frank Pajkurich were married February 3, 1973.



We have received a plea from the Boise City Zoo as follows: "Zoo People: We are planning a Caribou exhibit here at Boise. If successful, it will be the only Barren Ground Caribou here in the state of Idaho. To insure a successful exhibit, I am seeking help from my fellow members. If your Zoo is exhibiting or has exhibited Caribou successfully, please contact me by letter. I am interested in their type of enclosure, type of feed, climatic reactions and any information you can throw in. If you are not exhibiting these animals, search your memory banks and library for any information and contact me. The more affirmatives I can get on their well-being in captivity, the better my case to our Zoological Society. And there is also a good chance that when you visit us in June for our Regional Conference, you will see a fine Caribou exhibit." Write to: Mike Stevens, Boise City Zoo, AAZK Chapter 34, 1104 Royol Blvd., Boise, Idaho 83706 (Thanks to Mike Stevens)

### The Hess' and the Three Bears

Three bear cubs, born at the Philadelphia Zoo during January, are receiving tender, loving care from Penrose Research Lab Assistant Ann Hess and her husband Norman, Assistant Superintendent of Animals. During the day, Ann cares for the cubs in her office, bottle feeding them evaporated milk mixed with water and vitamins every three hours. When her work day is over, she and Norman transport the bears to their Westville, N.J. home, where they take turns with the nightly feedings.

### Chicago—Lincoln Park

Larry Sammarco has been promoted to the Class 1 Keeper position and is now Senior Keeper in the Children's Zoo. Retiring from Lincoln Park Zoo are three men with many years of Zoo Keeping to be proud of. Roy Hoff (32 Years of Zoo Keeping) cousin of Bill Hoff, Joe Ciacio (29 years) and Paul Dittambi (31 years) best known for his famous walk from Brookfield to Lincoln Park with Judy the Elephant. All three are retiring from Class 1 Keeper positions.

Keepers Care buttons are still available from the Lincoln Park Chapter AAZK for \$ .50 each.

Please send news items for publication in this column to Larry Sammarco, 5206 N. Ludlam, Chicago, Illinois 60630

## **CLASSIFIEDS**

POSITION WANTED: Keeper, Zoo Education, Zoologist and Research—Seeking position in a zoological garden. B.S. in Wildlife Biology. Pioneered the "Zoo Wagon" and gave animal lectures at the Kansas City Zoo; also keeper experience. Zoo veterinarian assistant in Japanese zoo for 2½ years while on military duty. Currently laboratory technician in United States Air Force Hospital stationed in Japan. I will complete military obligation this August, 1973, and will be available at that time. Full resume and references upon request. Contact: Robert G. Minor, Box 5047, APO S.F. 96323



## CLASSIFIEDS

Zoological Coordinator—fantastic opportunity for individual with thorough knowledge of animals and regulations. Largest private zoological project in the U.S. Very high salary. Call collect (212) 628-0100, Ms. Messer, Great Adventure.

Permanent position available in Florida for an experienced cat man with some training experience and ability to work an act. Applicant should have no bad habits, neat appearance and a good speaking voice for shows. Contact Lawrence E. Tetzlaff, Jungle Larry's Safari, Caribbean Gardens, Naples, Florida 33940.

Practical work with animals wanted: Past experience includes: mountain lions, Milwaukee, Wis.; snakes, Milwaukee County Zoo (research); jackass penguins, Dassen Island, South Africa. Am willing to work anywhere. Virginia Fifield, Brown University, Box 822, Providence, Rhode Island 02912.

## AAZK REGIONAL CONFERENCE

The welcome address at the regional conference in Boise City, will be presented by Idaho's Lt. Gov. Jack Murphy, and Robert Elgin, Director, Des Moines Zoo, will be giving the keynote address.

The AAZK regional conference at Boise City is just around the corner, and we still need Keeper speakers. So please send in your request for space in the program for your paper.

### AAZK REGIONAL CONFERENCE PRE-REGISTRATION FORM

I PLAN TO ATTEND THE 1973 REGIONAL CONFERENCE AT BOISE CITY,  
JUNE 4-5-6-1973.

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

ZOO/AQUARIUM/OTHER \_\_\_\_\_

PLEASE FORWARD ME ALL INFORMATION AND MATERIALS

SEND FORM TO: MR. CURT WILLIAMS, BOX 261, MERIDIAN, IDAHO 83642.

EARLY REGISTRATION WILL HELP IN PLANNING!



**Brookfield**

**Lincoln Park**

**Milwaukee**

**1974  
AAZK  
NATIONAL  
CONVENTION**

Something new for 1974, Three zoo hosts will have the pleasure of showing you around. Spend a day at Brookfield Zoo with host Dewey Garvey, Milwaukee Zoo with host Sam LaMalfa, Lincoln Park Zoo with hostess Pat Sass.

Convention Dates: April 22-25

Hotel Headquarters: Sheraton-Chicago, Chicago, Illinois.

Rates are: Single, \$20.00; twin-double, \$26.00; triple, \$31.00; one bedroom suite, \$40.00 and \$5.00 per additional cot.

If you would like to present a paper or other type of program at Chicago, please contact Dennis Grimm, 204 Olmstead Road, Riverside, Illinois 60546.

Besides representing your zoo by attending, plan to have a picture poster of your zoo, to hang in the session room.

Hope to see you at the convention. Watch THE KEEPER for more details and information — 3 and more in '74.



ZOO DIRECTORS - VETERINARIANS - KEEPERS  
FOR BALANCED NUTRITIONAL DIETS -  
QUALITY ASSURANCE -  
AND ECONOMICAL FEEDING PROGRAMS  
TRY  
NEBRASKA BRAND FELINE FOOD  
NEBRASKA BRAND BIRDS OF PREY DIET  
WAYNE DRY DIETS

*We also offer:* NEBRASKA BRAND HORSE MEAT - U.S.D.A. INSPECTED  
A PROGRAM TO HELP ZOOS SECURE THEIR OWN FREEZERS.  
LET US GIVE YOU DETAILS — PAY AS YOU USE.  
AN INFORMATIVE BOOKLET *"HELPFUL INFORMATION ON  
THE ART OF ANIMAL KEEPING."* WRITE FOR COPY.

FOR INFORMATION AND PRICES CONTACT  
DUANE A. STROTHER

**CENTRAL NEBRASKA PACKING CO.**

P.O. BOX 550  
NORTH PLATTE, NEBRASKA 69101  
Phone (308) 532-1250

A SUBSIDIARY OF ALLIED MILLS, INC., CHICAGO, ILLINOIS

Published by  
AMERICAN ASSOCIATION OF ZOO KEEPERS  
8024 Tommy Drive  
San Diego, California 92119

BULK RATE  
U.S. POSTAGE  
PAID  
BROOKFIELD, ILL.  
PERMIT NO. 92